

# Chapter 6

## Problem Drinking and Psychosocial Development in Adolescence

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For more than 25 years, our research on adolescent problem drinking has been guided by a social-psychological framework known as Problem Behavior Theory. The theory was developed initially for a study of alcohol abuse and other problem behaviors in a small, tri-ethnic community comprised of Hispanic-Americans, Native-Americans, and Anglo-Americans (Jessor, Graves, Hanson, & Jessor, 1968). It was next applied in a major longitudinal study of problem behavior and psychosocial development among cohorts of junior high school adolescents and college youth (Jessor, R. & Jessor, S. L., 1977). Subsequently, it provided the theoretical context for two large-scale, national sample surveys of junior and senior high school students (Donovan & Jessor, R., 1978; Jessor, R., Chase, & Donovan, 1980). Most recently, Problem Behavior Theory has been guiding a long-term follow-up study of the earlier junior high school and college longitudinal cohorts as they have traversed from adolescence and youth well into young adulthood (Jessor, R. & Jessor, S. L., 1984). My aims in this paper are to present a brief overview of Problem Behavior Theory and to review some of the research findings it has generated; the latter will permit at least an interim appraisal of the usefulness of the theory in accounting for variation in drinking and problem drinking among young people.

### The Conceptual Structure of Problem Behavior Theory

The general perspective of Problem Behavior Theory is psychosocial rather than biological, medical, or genetic. The most basic tenet of a psychosocial perspective on drinking behavior is that—like all other learned behavior—it is functional,

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purposive, and instrumental toward the attainment of goals. The goals that are attached to drinking, the meanings it has for the drinker, the various ways in which alcohol comes to be used, and even its experienced and observed effects, were all shaped by the norms and expectations of the larger culture and by the particular experiences a young person has had in the more immediate context of everyday life. An explanation of adolescent drinking and problem drinking, from a psychosocial perspective, extends beyond genetic and biological considerations, and beyond the pharmacological properties of ethanol. What it rests upon, instead, are the psychological, social, and behavioral characteristics of the youthful drinker, the relevant dimensions of the larger social environment, and the attributes of the situation in which drinking takes place. It is those properties that Problem Behavior Theory was designed to represent. The primary focus of Problem Behavior Theory is on three systems of psychosocial influence—the Personality System, the Perceived Environment System, and the Behavior System. Within each of the three systems, the explanatory variables reflect either *instigations* to problem behavior or *controls* against it, and, together, they generate a resultant, a dynamic state called *proneness*, that specifies the likelihood of occurrence of normative transgression or problem behavior. Problem behavior is defined as behavior that departs from the norms—both social and legal—of the larger society; it is behavior that is socially disapproved by the institutions of authority and that tends to elicit some form of social control response whether mild reproof, social rejection, or even incarceration.

Since proneness to engage in problem behavior is a system-level property, it is theoretically meaningful to speak of personality proneness, environmental proneness, and behavioral proneness. When proneness in all three systems is taken together, their combination generates the sovereign explanatory concept in Problem Behavior Theory—*psychosocial proneness*—that is used in the prediction and explanation of variation in problem behavior.

The concept of proneness, in specifying the likelihood of occurrence of problem behavior, is essentially synonymous with the concept of *risk*. All of the theoretical variables in the three explanatory systems may therefore be seen as *psychosocial risk factors* for problem behavior. Thus, psychosocial proneness and psychosocial risk can be considered to be essentially interchangeable notions.

The conceptual structure of Problem Behavior Theory is schematized in Fig. 6.1. Several general characteristics of the framework should be noted. First, it includes a fairly large number of variables and reflects an attempt to achieve relatively comprehensive representation in each of the psychosocial, explanatory systems. Second, some of the variables (e.g., Attitudinal Tolerance of Deviance, or Friends Models for Problem Behavior) directly implicate problem behavior, while others are linked to problem behavior only indirectly, that is, by theory (e.g., Self-Esteem, or Parent-Friends Compatibility). The former are more proximal to and the latter more distal from problem behavior. Because of the obviousness of their connection with behavior, proximal variables generally yield stronger relationships, but distal variables, being less obvious, are often of greater interest theoretically. The variables shown in

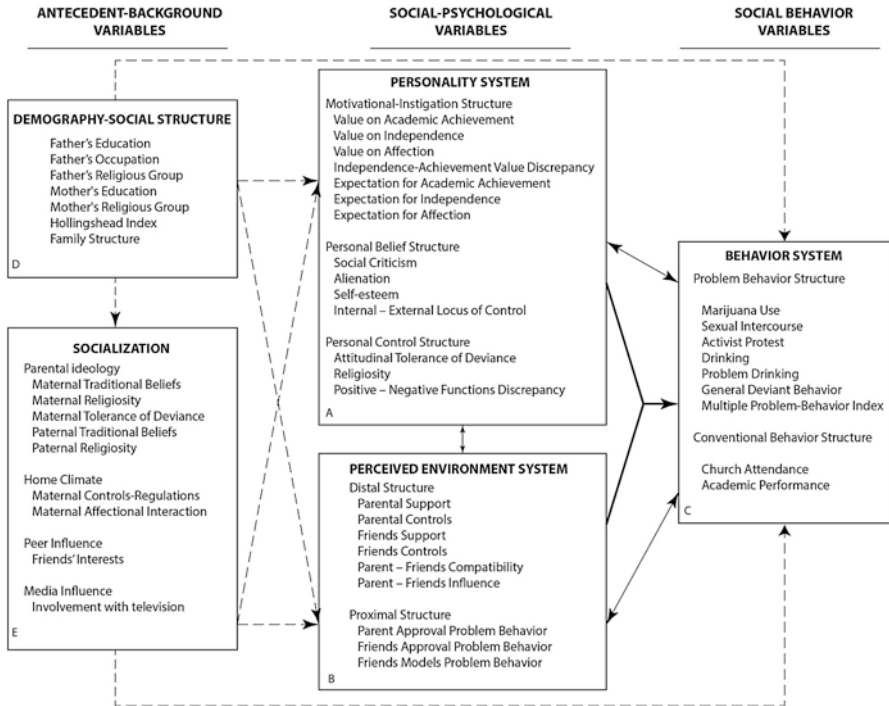


Fig. 6.1 The conceptual structure of Problem Behavior Theory (Jessor & Jessor, 1977)

the Perceived Environment System are actually organized into distal and proximal structures, but the very same distinction could also be made in the Personality System had we not sought to represent the instigation/control distinction there instead.

Third, the figure illustrates a fundamental premise of our conceptual orientation, namely, that all behavior is the result of person-environment interaction, that the logic of explanation requires mapping both of those systems simultaneously, and that causal priority cannot be allocated to either one alone. This premise is illustrated by the heavy, unidirectional arrow showing the *joint* influence of the Personality System and the Perceived Environment System on the Behavior System. It was Kurt Lewin (1951) who, perhaps more than anyone else, gave salience to this explanatory stance; he termed it the 'field theory' perspective in social science. After several decades of neglect, the field theory perspective has been revitalized in contemporary psychology under the concept of 'interactionism' put forth most vigorously by David Magnusson (Magnusson & Endler, 1977; Magnusson & Allen, 1983).

Finally, although the attention in this presentation will be focused on the three systems that are causally closest to the occurrence of problem behavior, those shown in Boxes A, B, and C, the framework does encompass the more distal systems of social structure and socialization that are more remote in time or in the causal chain and whose influence on behavior is largely mediated by the more proximal systems of variables.

Since the rationale for each variable has been elaborated in detail elsewhere (Jessor, R. & Jessor, S. L., 1977), only a brief description will be presented here. The presentation will be restricted to Boxes A, B, and C, and to specifying the theoretically problem-behavior prone direction of the variables.

The variables that constitute the Personality System (Box A) are all at the socio-cognitive level and reflect social meanings and developmental experience, unlike the so-called 'deeper', more recondite drives of psychodynamic theories. They are values, expectations, beliefs, attitudes, and orientations toward self and others, and they are organized into three structures depending upon whether they constitute instigations to problem behavior or controls against it, and, if controls, whether they are relatively proximal to or distal from problem behavior. The motivational-instigation structure is concerned with the directional orientation of action; the latter is determined by both the goals toward which a person strives and the concomitant expectations of attaining those goals. Two goals are considered particularly relevant to adolescent problem behavior: academic achievement (an orientation toward a conventional institution—the school), and independence (an orientation toward autonomy and unconventionality). Low expectations for attaining valued goals, whatever their orientation, should also be an instigation to problem behavior, either as an alternative approach to goal attainment (e.g., cheating on a test) or as a learned way of coping with failure and frustration (getting drunk in order to forget one's troubles).

The other two structures in the Personality System are both control structures, the personal belief structure being more distal and the personal control structure being more proximal to problem behavior. In the personal belief structure, the variable of social criticism refers to a rejection of societal norms, values, and practices, and the variable of alienation refers to a sense of meaninglessness in everyday roles and isolation from others. Both variables suggest an attenuation of regulatory influence and a consequent lessening of controls against problem behavior. Self-esteem, when low, suggests the absence of a stake that could be jeopardized by engaging in problem behavior, that is, there is little to lose, while an external control orientation makes moot the very idea of appropriate behavior since whatever happens is a matter of luck or chance. In the personal control structure, the variables, being more proximal, are also more obvious in their control implications. An attitude of tolerance of deviance indicates that transgressions are not deemed to be 'wrong', and low involvement with religion suggests an absence of internalization of the moral perspective of the main conventional institution in society. The positive-negative functions discrepancy indicates lower control when the positive 'reasons' for engaging in problem behavior (e.g., drinking "makes get-togethers more fun") outweigh

the negative reasons or functions (e.g., drinking “can lead to losing control over your life”).

*Personality proneness* to problem behavior consists, therefore, of lower value on academic achievement, higher value on independence, lower expectations of attaining both goals, greater social criticism, greater alienation, lower self-esteem, more external control, greater tolerance of deviance, less religiosity, and greater positive versus negative functions discrepancy. The more the instigation and control variables fall into this personality pattern, the greater the likelihood of problem behavior.

The variables in the Perceived Environment System (Box B) refer to environmental characteristics—supports, influence, controls, models, and expectations of others—that are capable of being cognized or perceived, that is, they are socially-organized dimensions of potential meaning. As we have argued elsewhere (Jessor, R. & Jessor, S. L., 1973; Jessor, R., 1981), it is with the perceived, or phenomenal, or meaningful environment that behavior is most invariant. In the distal structure of the perceived environment, the variables serve mainly to characterize whether the social context in which an adolescent is located is more parent- and family-oriented or more friends- and peer-oriented. The latter, in contrast with the former, would suggest less involvement with conventional norms, more exposure to models for problem behavior, and less control over transgression. In the proximal structure, the variables characterize the social context in terms of the prevalence of models and supports or approval for problem behavior. *Perceived environment proneness* to problem behavior consists, therefore, of lower parental support and controls, lower friends controls, lower parent-friends compatibility, greater friends- than parents-influence, lower parental disapproval of problem behavior, and greater friends approval for and models of problem behavior. The more this cluster of social-psychological variables obtains, the more likely the occurrence of problem behavior.

The variables in the Behavior System (Box C) reveal the degree to which our interest in the domain of problem behavior has been both differentiated and relatively comprehensive. Indeed, the theory has been applied to yet other behaviors not represented in Box C, such as cigarette smoking (Jessor, R., Donovan, & Widmer, 1980). The possibility that phenotypically very different behaviors (e.g., using marijuana, getting drunk, having sexual intercourse, smoking cigarettes, or—in the decade of the 70s—taking part in a march or a demonstration) might all serve the same genotypic function for adolescents (e.g., repudiating conventional norms, affirming independence from parents, gaining status in the peer group) is what underlies the notion of a structure of problem behavior.

Although the various problem behaviors usually elicit some form of social control response, as noted earlier, it is important to recognize their symbolic meaning and the variety of psychosocial functions they can—and have often been learned to—fulfill for adolescents. Problem behavior may be an instrumental effort to attain goals that are blocked or that seem otherwise unattainable. Thus, precocious sexual intercourse and adolescent pregnancy may be a way of attaining independence from parental authority and taking control of one’s life. Problem behavior may serve as

an expression of opposition to the norms and values of conventional society, as engaging in drug use during the Vietnam era symbolized. It may serve as a coping mechanism for dealing with anxiety, frustration, inadequacy, and failure or the anticipation of failure; heavy involvement in alcohol use would be relevant here. Problem behavior may also function to express solidarity with peers or to demonstrate identification with the youth culture, e.g., by cigarette smoking, or sharing a 'joint', and it may also serve to confirm personal identity, e.g., drinking and driving after drinking as ways of being 'cool' or 'macho'.

Perhaps the most salient function of problem behavior in adolescence is as a transition-marker, a way of placing a claim on a more mature status. Since many of the problem behaviors, especially drinking and sex, are age-graded, that is, considered by society as appropriate only for those who have reached a certain age or age-related status and inappropriate for those younger, engaging in these behaviors earlier than considered appropriate can be a way of affirming maturity and making a developmental transition toward adulthood. Overall, then, there is nothing necessarily irrational, perverse, or psychopathological about young people engaging in problem behavior; for adolescents, such behavior can fulfill important goals and can be an essential aspect of psychosocial development.

The conventional behavior structure of the Behavior System includes behaviors oriented toward two conventional institutions of society, church and school. Church attendance and academic achievement are the key variables in this structure. *Proneness to problem behavior in the Behavior System* refers, therefore, to higher involvement in *other* problem behaviors than the one being predicted or explained, and lower involvement in conventional behavior. Considering psychosocial proneness in all three systems simultaneously—Personality, the Perceived Environment, and Behavior—yields a clearer picture of the multivariate and dynamic nature of explanation in Problem Behavior Theory.

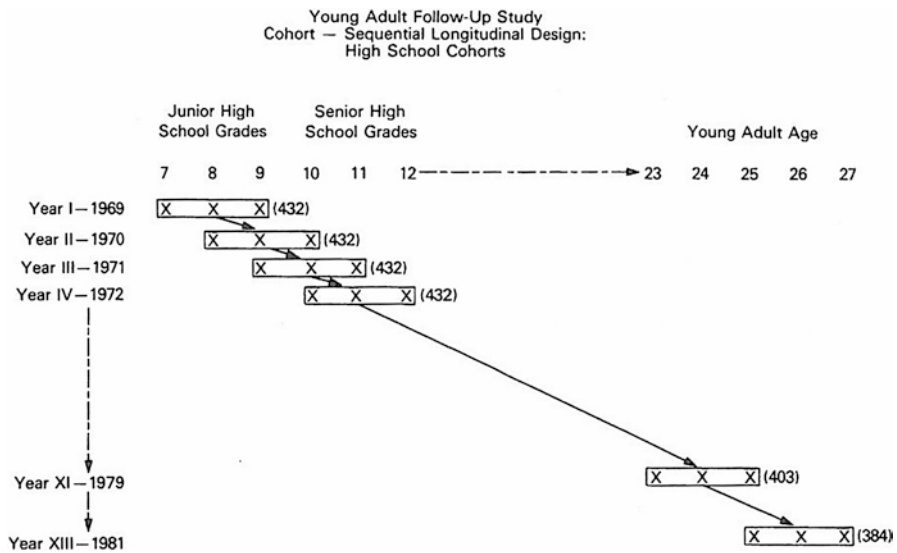
The relevance of such a conceptual framework to adolescent alcohol use and abuse ought to be obvious. Given both the legal and the social norms prevalent in American society, drinking per se is widely considered a transgression when adolescents are below a certain age. In addition, the excessive use of alcohol by adolescents, or its inappropriate use—for example before driving—are viewed with disapproval in many societies, and generally they elicit some sort of negative social sanction. Adolescent alcohol abuse or problem drinking can, therefore, be subsumed under the rubric of problem behavior, and that makes Problem Behavior Theory apposite as a potential account of variation in problem drinking. The variables in the theory should constitute, in other words, a set of theory-derived psychosocial risk factors for adolescent problem drinking.

As indicated earlier, Problem Behavior Theory has been employed in a variety of studies to account for a variety of adolescent behaviors ranging from delinquency and illicit drug use, to cigarette smoking and sexual intercourse, to drinking and problem drinking. In all of this work, by ourselves and by colleagues in the U.S. and abroad (e.g., Chassin et al., 1981; Rooney & Wright, 1982; DiTecco & Schlegel, 1982), the concepts and measures have been found useful and illuminating. As an

illustration from our own work, we found that regression analysis of overall psychosocial proneness in relation to a multiple problem-behavior index (a composite of five different problem behavior domains—problem drinking, marijuana use, non-virginity, activist protest, and general delinquency) yielded multiple correlations ( $R_s$ ) ranging around 0.70 for the high school males and females and also for the college males and females. When the analyses were broken down by gender by grade subgroups in the high school, the multiple correlations for the 10th, 11th, and 12th grade males were, respectively, 0.73, 0.79, and 0.74; for the females they were, respectively, 0.83, 0.80, and 0.74. Thus, Problem Behavior Theory accounts for approximately 50% of the variance in this composite measure of adolescent problem behavior and, in some instances, for more than 60%.

### The Longitudinal Design of the Developmental Study

In this paper, our aim is to report that portion of our findings that bear upon adolescent drinking and problem drinking. Most of the data will be drawn from our ongoing longitudinal study of cohorts of junior high school students, both male and female, whom we have followed from 1969, when they were ages 13, 14, and 15, through 1981, when they had reached the ages of 25, 26, and 27. (A parallel longitudinal study of college freshmen, begun in 1970, has also been carried through 1981, but those data, while corroborative, will not be reported here.)



**Fig. 6.2** The longitudinal design for the High School Sample from adolescence to young adulthood



The cohort-sequential research design for the high school cohorts, with six waves of data, is shown in Fig. 6.2.

Since details about the samples and the design can be found in earlier publications (Jessor, R. & Jessor, S. L., 1977; Jessor, R. & Jessor, S. L., 1984), only brief comment is needed here. From an original random sample of 1126 junior high students drawn from three schools in a small western city, 589 (52%) participated in the first year of the study in 1969. By the end of the Year IV testing in 1972, 483 students (82% of the Year I participants) were still in the study. Of these, 432 students (188 males and 244 females) had participated in all 4 years of testing; they were designated the *core developmental sample*. Located and contacted seven years later, in 1979, fully 94% resumed their participation as young adults in the fifth wave of data collection. Of those who participated in 1979, 96% participated again in the sixth data wave collected in 1981. Thus, 90% of the high school core developmental sample was retained after the 7-year hiatus for the two young-adult data waves, thereby safeguarding its integrity over the 12-year span of the study thus far. Demographically, the sample is relatively homogenous; it is almost entirely Anglo-American in ethnic background and middle class in socioeconomic status.

Data were collected in school annually in the spring of each of the first 4 years. A lengthy, theory-derived questionnaire, approximately 50 pages in length and requiring about an hour and a half to complete, was developed. It consisted largely of psychometrically-developed scales or indexes assessing all of the variables in all of the systems of the Problem Behavior Theory framework. For the fifth and sixth data waves, questionnaires were sent and returned by mail. The longitudinal data lend themselves, of course, to the usual kinds of cross-sectional analyses at each wave of data, but more important and even more interesting, they permit analyses of development and change in drinking behavior and problem drinking and of development and change in their psychosocial correlates. In the remainder of this paper, we will present findings about the utility of the theoretical framework for accounting for cross-sectional variance in problem drinking, for predicting time of onset of drinking among abstainers, and for predicting problem drinking in young adulthood from the earlier measures of key psychosocial variables or risk factors in adolescence.

## **Problem Drinking and the Syndrome of Problem Behavior**

It is important, before presenting these findings, to make clear one of the important implications of locating problem drinking within a larger structure of problem behavior in the Behavior System, namely, that it should co-vary positively with the other problem behaviors in the structure and relate negatively to involvement in conventional behavior. Indeed, as it turns out in a fairly large and robust set of studies, the pattern of interrelations is systematic enough to suggest that problem drinking is part of a *syndrome* of adolescent problem behavior.



**Table 6.1** Relationship of Problem-Drinker Status to Other Problem Behaviors

Drinker status	Percentage							
	Marijuana users				Non-virgins		High in church attendance	
	Male	Female	Male	Female	Male	Female	Male	Female
Abstainers	0	2	5	4	15	2	64	52
Non-problem drinkers	31	42	23	39	40	34	23	33
Problem drinkers	79	80	52	73	73	43	27	18

High School Sample: Year IV (1972)

In order to explore this issue, we classified our cohorts in the high school study into Abstainers, Non-problem Drinkers, and Problem Drinkers based upon their frequency of drunkenness and their drinking-related negative social consequences scores in Year IV (1972) of the longitudinal study, when they had all reached senior high school, that is, were in grades 10, 11, and 12. (Among the males, the mean frequency of drunkenness in the past year was 24 times for the Problem Drinkers and 2 times for the Non-problem Drinkers; among the females, the comparable figures are 18 and 2, respectively. The classification procedure resulted in 28% of the males and 16% of the females being classified as Problem Drinkers. For further details, see Donovan & Jessor, R., 1978, and Jessor, R., 1985, p. 112.) The interrelations between problem drinking and other problem behaviors can be seen in Table 6.1.

It is quite apparent from the different percentages in the table that being classified as a Problem Drinker is strongly associated with higher rates of involvement in other problem behaviors. Whereas 79% of the problem drinking males and 80% of the problem drinking females have used marijuana, the comparable figures for the non-problem drinking males and females are only 31% and 42%, respectively. Problem drinker status is also highly associated with being sexually-experienced, the rates for the Problem Drinkers being nearly double those of the Non-problem Drinkers. And the same direction of difference in rates is observable for the measure of self-reported delinquency or deviance. Of further interest in the table is the reversed relation of Problem Drinker status to the conventional behavior of church attendance for the females. Finally, it is noteworthy that being an Abstainer implies almost *no* involvement with other problem behaviors and very high involvement in conventional behavior. These data suggest that the decision to begin drinking may be a major transition that reverberates across a variety of other behaviors and that, rather than representing a specific behavior change, the initiation of alcohol use in adolescence may signal a change in overall lifestyle.

To establish that the covariation between problem drinking and other problem behaviors is not a finding limited to the specific cohorts in our longitudinal study,

**Table 6.2** Correlation Among Selected Measures of Problem and Conventional Behavior, National Sample Data—1978 (11th and 12th graders, by sex)

Measure	1	2	3	4	5	6	7
<i>Problem behavior</i>							
1. Number of cigarettes smoked per day in the last month	–	0.39	0.42	0.36	0.40	–0.24	–0.24
2. Times drunk in the past year	0.32	–	0.65	0.53	0.52	–0.25	–0.23
3. Frequency of marijuana use in the past 6 months	0.34	0.59	–	0.58	0.49	–0.27	–0.28
4. Number of other illicit drugs ever used	0.33	0.43	0.59	–	0.43	–0.26	–0.21
5. General deviant behavior in the past year	0.32	0.46	0.43	0.36	–	–0.20	–0.28
<i>Conventional behavior</i>							
6. Church attendance frequency in the past year	–0.16	–0.24	–0.26	–0.21	–0.16	–	0.17
7. School performance	–0.22	–0.25	–0.22	–0.14	–0.28	0.12	–

*Note:* All correlations are statistically significant at the 0.001 level (two-tailed test). The lower triangular matrix contains the correlations for the males ( $n = 1208$ ) with no missing data; the upper triangular matrix contains the correlations for the females ( $n = 1444$ )

we have examined the same issue in data from a national sample of 11th and 12th graders collected in 1978 using a questionnaire that included many of our Problem Behavior Theory measures (Jessor, R., Donovan, & Widmer, 1980; Rachal et al., 1980). In these analyses, continuous measures are used so that Pearson correlations rather than percentages can be reported.

In Table 6.2, it can be seen that there are sizeable positive correlations among all of the problem behaviors and negative correlations for all of them with both of the measures of conventional behavior. Times Drunk in the Past Year, the main component measure of problem drinking status, correlates substantially with cigarette smoking, marijuana use, the use of other illicit drugs, and general deviant behavior for both sexes. Again, in this totally independent national sample, the evidence is compelling that problem drinking is part of a larger syndrome of adolescent problem behavior, a conclusion that is consonant with its conceptualization in Problem Behavior Theory. Finally, we have addressed this same issue most recently by using maximum-likelihood factor analysis on a variety of data sets for both adolescents and young adults; consistently, a single common factor emerges, providing additional support for the notion of a syndrome of problem behavior that encompasses problem drinking (Donovan & Jessor, R., 1985).

**Table 6.3** Multiple Correlations of Problem-Behavior Theory Measures with Adolescent Problem Drinking

Theoretical measures	Times drunk past year		Problem-drinker status	
	Male	Female	Male	Female
Personality system	0.36	0.29	0.48	0.49
Perceived environment system	0.46	0.35	0.61	0.59
Field pattern	0.58	0.40	0.72	0.70
Overall set	0.60	0.43	0.79	0.76

High School Sample, 1972

## Problem Behavior Theory and Variation in Adolescent Problem Drinking

Having established the linkage of problem drinking to other problem behaviors, we can now turn to an examination of the usefulness of Problem Behavior Theory for explaining cross-sectional variation in adolescent problem drinking. For purposes of economy and because details have been presented elsewhere (Jessor, R. & Jessor, S. L., 1977), our analyses will focus on the multiple variables that constitute the key explanatory systems in the theory, rather than presenting data for each individual variable or psychosocial risk factor. The results of multiple regression analyses of the major variables in the Personality System, the Perceived Environment System, the two systems taken together to represent a 'field theory' perspective, and finally, an Overall Set that also includes variables from the Behavior System are all presented in Table 6.3.

Two criterion measures are employed in the regression analyses; one is a continuous measure, namely, frequency of drunkenness in the past year, and one is a dichotomous measure, namely, Problem Drinker versus Non-problem Drinker status. As can be seen in Table 6.3, the usefulness of Problem Behavior Theory is clearly established. Each of the explanatory systems is significantly correlated with both criterion measures of problem drinking, and for both sexes, with the multiple correlations being considerably and consistently higher in relation to the more comprehensive problem-drinker status measure. The Perceived Environment System measures account for more of the variance than the Personality System measures, but this is probably due to their inclusion of measures that are more proximal to problem drinking behavior, e.g., models and approval for drinking.

When the two systems are combined into the Field Pattern, there is a significant increment in variance explained for both sexes, and the Overall Set that includes measures of other problem behaviors yields yet another significant increment in variance accounted for. Considering the Problem Drinker versus Non-problem Drinker criterion measure, the multiple correlations of the Overall Set ( $R_s = 0.79$  and  $0.76$ ) account for about 60% of the variance in problem drinking for both males

and females. That represents a substantial contribution to a psychosocial explanation of adolescent problem drinking.

What that psychosocial explanation implicates is the pattern of proneness towards problem drinking that underlies the multiple correlations for each system. As reflected by the individual measures that typically enter the regression equations:

Proneness in the Personality System includes:

- Lower value on academic recognition
- Higher value on independence
- Independence valued more highly relative to academic recognition
- Lower expectation for academic recognition
- Greater attitudinal tolerance of deviance
- Lesser religiosity

Proneness in the Perceived Environment System includes:

- Lower compatibility between parent and friends' expectations
- Greater perceived influence from friends than parents
- Greater friends approval for problem behavior
- Greater friends models for problem behavior

And proneness in the Behavior System includes:

- Greater involvement in proto-delinquent behavior
- Greater involvement with marijuana use
- Less attendance at church

This profile of psychosocial proneness to adolescent problem drinking follows from the conceptual structure of Problem Behavior Theory, and these data provide strong support for the theory. The basic underlying dimension that would seem to capture best the various components in the profile is a dimension of *psychosocial unconventionality*, implying a generalized skepticism about societal values, a rejection of its norms, and a readiness for non-conformity. The pattern is similar to, even isomorphic with, that emerging from comparable analyses of other problem behaviors, such as marijuana use, delinquency, or sexual precocity, and the basic findings have been independently replicated in national sample data from both a 1974 and a 1978 survey (Jessor, R. Donovan, & Widmer, 1980; Rachal et al., 1980; Rachal et al., 1975).

## Predicting the Onset of Drinking in Adolescence

Earlier in this paper, it was noted that many problem behaviors are age-graded and—to retain drinking as the example—are proscribed for those under a certain age while being permitted and even institutionally encouraged for those beyond that age. Engaging in such age-graded problem behaviors early can represent for an adolescent a developmental transition from a 'less mature' to a 'more mature' status, or from 'adolescent' to 'youth' or 'young adult'. Since engaging in an

age-graded problem behavior early is a transgression of age norms, and since Problem Behavior Theory is designed to account for transgression of any norm, the theoretical concept of psychosocial proneness to problem behavior can logically be applied to such transition behavior. In this context, the concept can be seen as summarizing 'transition-proneness', and the latter should theoretically reflect the very same pattern of variables we have described as problem-behavior proneness. The concept of transition-proneness gives a strong developmental cast to Problem Behavior Theory and illuminates the developmental role played by the initiation of problem behavior during adolescence. The greater the transition-proneness, the greater the likelihood of occurrence of transition-marking behavior—including drinking—and the earlier such behavior is likely to occur.

It has been possible with the longitudinal data in our study to test that developmental proposition directly in relation to the onset of three different transition behaviors—initial sexual intercourse, initial marijuana use, and initial drinking. The results for all three of these behaviors are consonant. With respect to our concern here with drinking, the procedure was to establish five groups, a posteriori, in Year IV (1972) of the high school study based upon whether and when the transition from Abstainer to Drinker took place over the preceding 4 years of annual data collection. The five groups consisted of a group already drinking in Year I (1969), a group that began drinking in the 1969–70 year, one that began in the 1970–71 year, one that began in the 1971–72 year, and finally, one that was still abstaining by the 1972 testing. These five groups are, thus, fully ordered in relation to onset and time of onset of drinking over the 4 years of the adolescent phase of our longitudinal study.

By looking at the mean scores of these five groups on the psychosocial variables measured in Year I (1969), we can determine whether the groups are ordered in a way that is consonant with the differential transition-proneness expected on the basis of Problem Behavior Theory. Indeed, that is the case. To select one measure for illustration, the mean score on Value on Academic Achievement is perfectly ordered ( $F < .001$ ) across these five groups, with the lowest mean value associated with the group that was already drinking in Year I, the highest mean value associated with the group that is still abstaining in Year IV, and the other three means ordered in exact relation to the time of transition or onset of drinking of the other three groups. These data are a paradigm case for the relation of variation in psychosocial transition-proneness to variation in time of onset of drinking in adolescence. Thus, it is clear that the concepts in Problem Behavior Theory can serve to represent a differential 'readiness' for developmental change through the initiation of new transition behaviors such as drinking.

In order to assess the overall usefulness of the theory in predicting variation in time of onset of drinking, we regressed the time of onset measure against the Year I (1969) psychosocial measures among all of the 1969 abstainers. The multiple correlations ( $R_s$ ) for the Overall Set of variables were 0.47 for males and 0.37 for females, both correlations significant at  $p < .001$ . These results provide important support for the relevance of Problem Behavior Theory to the development of adolescent drinking behavior. They indicate that the theory is able to identify significant psychosocial risk factors for the onset and for the earliness of onset of alcohol use among adolescents who have not yet begun to drink.

## Predicting Problem-Drinking in Young Adulthood from Psychosocial Risk in Adolescence

The final topic to be considered in relation to the usefulness of Problem Behavior Theory as a psychosocial-developmental framework to account for problem drinking is the prediction it affords of problem drinking in young adulthood. The basic model for these analyses involves the use of the fifth and sixth data waves to establish whether or not a participant in the longitudinal study met the criteria for classification as a problem drinker in *either* 1979 or 1981, and then to regress that criterion against the theoretical measures collected 7 or 9 years earlier in the fourth data wave in 1972.

Before we present those findings, it is important to emphasize that there is considerable discontinuity in problem drinking between adolescence and young adulthood. Among the high school males who were problem drinkers in 1972, only 51% were also problem drinkers in 1979 and/or 1981, while 49% were non-problem drinkers. For the females, the comparable percentages are 26 and 74, respectively. Thus, knowledge of problem drinker status in adolescence is not very predictive, by itself, of chronicity of problem drinking later on in the life trajectory, at least in the young adult portion of it that we assessed.

The results of the regression analyses are presented in Table 6.4. Problem drinker status in adolescence (1972) was controlled by running the analyses *within* the adolescent Problem Drinker group and *within* the adolescent Non-problem Drinker group separately. As can be seen in Table 6.4, the pattern of psychosocial proneness to problem behavior that obtained *in adolescence* is significantly predictive of problem drinking in young adulthood 7 or 9 years later. The Overall Set of adolescent measures of psychosocial proneness yields a multiple correlation ( $R$ ) of 0.74 for males and 0.56 for females, among those who were problem drinkers in 1972. Although the variance accounted for among the males is nearly twice that among the females, both multiple correlations are significant at  $p < .001$ . The difference between the sexes is due primarily to the greater predictiveness of the Personality System measures for the males ( $R = 0.60$ ) than for the females ( $R = 0.29$ ). Among adolescent problem drinkers, then, Problem Behavior Theory specifies a pattern of

**Table 6.4** Multiple Correlations of Problem Behavior Theory Measures in Adolescence with Problem Drinking in Young Adulthood

Adolescent (1972) theoretical measures	Young Adult (1979/81) Problem-Drinker Status	
	Male ( $n = 45$ )	Female ( $n = 35$ )
Personality system	0.60	0.29
Perceived environment system	0.51	0.49
Field pattern	0.71	0.49
Overall set	0.74	0.56

Problem drinkers, 1972. High School Sample

psychosocial risk for the continuation or discontinuation, that is, for the ‘chronicity’, of problem drinking across further lifespan development. (Parallel analyses among adolescent *non*-problem drinkers also yielded significant multiple correlations for young adult problem drinker status, but they were lower than those among the adolescent problem drinkers; for the Overall Set the *R*s for the males and females were 0.58 and 0.35, respectively.)

The theoretical attributes in these *longitudinal* analyses, that is, the profile of adolescent psychosocial risk factors, is similar to the profile that emerged in the *cross-sectional* analyses of adolescent problem drinking presented earlier. Such comparability between the cross-sectional and the longitudinal accounts serves to strengthen conviction about the relevance of Problem Behavior Theory as an explanation of the developmental course of adolescent problem drinking.

## Conclusion

In this paper, I have endeavored to present a précis and overview of Problem Behavior Theory, the psychosocial and developmental framework that has guided our research in the area of drinking behavior for two and a half decades. The internal logic of the framework has, of course, been explored, but our focus here has been on the external linkage of the theory to alcohol use and, in particular, to adolescent problem drinking. Several points are worth emphasizing from the research findings that have been presented.

First, it is apparent that each of the explanatory systems—Personality, Perceived Environment, and Behavior—is a significant source of variance in adolescent problem drinking for both males and females. Any effort to account for variation in problem drinking that fails to include all three of those systems must remain only partially successful. Second, the notion of psychosocial proneness, encompassing the risk factors in all three systems, yields a substantial explanatory grasp of adolescent problem drinking, accounting for approximately 50% of the criterion variance. Third, the usefulness of Problem Behavior Theory has been established in a more than usually compelling way by adducing converging support from quite diverse lines of evidence: cross-sectional analysis of adolescent problem drinking, predicting the time of onset of drinking among abstainers, and predicting young adult problem drinking from psychosocial risk factors in adolescence. Fourth, the research has shown the connectedness of problem drinking with other problem behaviors and the utility of its conceptualization as part of a syndrome of functionally-related adolescent behavior. Finally, the theoretical concept of transition proneness—the developmental analogue of problem-behavior proneness—has illuminated the role that problem behavior may play in normal adolescent development.

Work on Problem Behavior Theory continues in an ongoing effort to extend its application to young adult development (Jessor, R., Donovan, & Costa, 1991), to prevention (Perry & Jessor, R., 1985), and to behavioral health (Jessor, R., 1984). Only when we have achieved a fuller appreciation of its limitations and have arrived



at a better understanding of its grasp will it be possible to make a more definitive appraisal of its ultimate usefulness.

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